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DONALD MC LEISH

NO ORDINARY, EVERYDAY BREAD, BUT MADE FOR SPECIAL OCCASIONS, *LEPSE* EMERGES WAFER-THIN FROM THE BOARD AND ROLLING PIN OF THIS NORWEGIAN HOUSEWIFE (Bulletin No. 1)

Bulletin No. 1, May 3, 1948

Rainy Skies Are Bergen's "Usual" Weather

IF the sun shone last week when the United States carrier task force made its scheduled goodwill call at Bergen, Norway, it was the exception rather than the rule. According to a Norwegian story, a sea captain of Bergen once sailed into his home port (illustration, next page) under a bright sun. Convinced by the unaccustomed sight that he had entered the wrong harbor, he turned back.

Norway's old and beautiful port is as rainy as many a spot in the tropics. Two hundred days of pouring, drizzling rain may count up to a total of six watery feet in a year. But few of the city's residents mind the weather, because they are always prepared for it. Umbrellas are standard equipment at all times. Even the babies in their carriages are provided with raincoats and hats.

Rain Not the Only Claim to Fame

So much water drips from Bergen's parked umbrellas that the city's stands are famous for their generous proportions. In some of the restaurants coat and umbrella racks have drain pipes through which the water flows out to gutters in the street.

Bergen, however, is noted for many other things. This misty port on Byfjord was a going establishment more than 400 years before Columbus set sail to the west. It was the capital of old Norway and is still the leading industrial and commercial center of the west coast. With nearly 108,000 inhabitants, it ranks as Norway's second-largest city.

Bergen is a "must" on the list of most travelers to the land of the Vikings. Visitors admire the picture-postcard effect of red-roofed houses climbing the slopes from the harbor, backed by the seven rocky peaks that rim the city's landward outskirts. Seaward, a cluster of islands provides some shelter from the fury of the fierce North Sea gales. More important to Bergen's residents than the spectacular view is the fact that the warm Gulf Stream keeps the fjord's northern waters open the year around.

Birthplace of Famous Musicians

Bergen's typical activities include a busy merchant marine and an enormous fishing fleet, with shipyards to service them, and wharf-markets where the fishing vessels tie up. Educational institutions include a naval academy, a public library, an observatory, and museums. In the national theater, before the war, plays were given daily from September to May. An orchestra company presented weekly concerts during the winter, and in the summer a military band played daily in the park.

Among Bergen's famous sons were the composer, Edvard Grieg, and the noted violinist, Ole Bull. Ibsen was employed as an assistant in the early days of the national theater—itself an idea of Bull's.

Although electric streetcars glide through its streets and stone buildings have replaced many of the old wooden structures destroyed in several

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DENVER POST

FROM HISTORIC PICTURES SUCH AS THIS, HOLLYWOOD COPIES "HORSE OPERA" SETS: THE MINING TOWN OF CREEDE, COLORADO (Bulletin No. 2)

The Holy Moses strike started a rush that pushed the population to a roaring 8,000 by 1893. Today, these buildings are mostly gone, but the shrunken town still burns its street lights 24 hours a day—an echo of Cy Warman's boastful boomtime poem, "There is no night in Creede."

Bulletin No. 2, May 3, 1948

Colorado, Early Source, Hunts More Uranium

THE southwest Colorado counties, where drilling for uranium deposits is soon to begin, offer a fitting backdrop for the recovery of the mineral that yields atomic energy.

Occupying about 40 square miles, the public lands set aside for use of the Atomic Energy Commission form a little-traveled corner in the spectacular, almost violently colorful Southwest where rich mineral finds (illustration, next page) have occurred many times in the past.

Madame Curie Used Colorado Uranium

It was in this vicinity that one of the earliest finds of radioactive ore was made. Obtained near the little settlement of Naturita, in Montrose County, several tons of this uranium-bearing ore were shipped in 1898 to Paris, where they were used by Madame Curie in the extraction of the element radium.

Later, after major sources of uranium ore were turned up in other countries, the Colorado workings were abandoned as uneconomical. Still later, during the atom bomb's wartime development, Colorado became the leading state in uranium production.

The districts to be explored in Colorado's Montrose and San Miguel counties reach to the southeast borders of Utah. Off the main highways and railroads, they lie deep in a region in which scenery and weather seem to vie for melodramatic effects.

In the San Juan Mountains that cut off this part of Colorado from the rest of the state, some of the nation's highest peaks reach icy heights above sage and cactus plains whose sun-baked rocks are often too hot to handle. There, wind and sand have created fantastically eroded shapes in sandstone arches and towers, painted through the day's changing lights in all the colors of the rainbow.

Metals Brought Settlement

When the deep snow melts in the mountains, it may send water raging through dry gullies of drought-plagued communities so suddenly that unwary motorists have been caught in the flood.

Long before uranium became significant, minerals were making history in the San Juan Mountains. Silver and gold were lures that helped found many settlements (illustration, inside cover) of the area in the roaring seventies and eighties. One section of road through the mountains is known as the Million Dollar Highway because it was surfaced with gold-bearing gravel before the rocks' value was known.

Amid ghost towns of the earlier time, modern mining is still carried on for gold and silver, and for even more valuable lead, zinc, and vanadium, used to harden steel.

In and around today's uranium country is found one of the few remaining frontier lands of the Old West. Deer, elk, bears, and mountain lions roam the highlands close by settled and fertile farmlands reclaimed by irrigation.

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disastrous fires, Bergen retains much of its old-time appearance, in contrast to modern Oslo. As a characteristic example of old Norway, it has for years been the chief objective of sightseeing trips to the west Scandinavian country.

In Bergen Museum, exhibits include domestic utensils of Viking days. Meals cooked by recipes handed down for generations, and fashioned with old-style kitchen gear (illustration, cover), represent the typical hospitality of the country to today's visitors.

In the centuries since 1070 when King Olaf Kyrre made it a town, Bergen has had a crowded and often dramatic career. In the 15th century, its already rich fishing trade came under control of the powerful German merchants of the Hanseatic League. Eventually the Norwegians rebelled and reclaimed their own commerce.

During World War II, when the Germans occupied Norway, they made Bergen a U-boat base. British bombing wrought some damage. A center of Norwegian resistance, the port was more badly battered in 1944 when a German munitions ship exploded in the harbor.

NOTE: Bergen may be located on the National Geographic Society's map of Europe and the Near East. Write the Society's headquarters, Washington 6, D. C., for a price list of maps.

See also, "White War in Norway," in the *National Geographic Magazine* for November, 1945*; "Norway, an Active Ally," March, 1943*; and "Country Life in Norway," April, 1939; and, in the GEOGRAPHIC SCHOOL BULLETINS, November 25, 1946, "Norway Rebuilds Its Merchant Marine." *(Issues marked by an asterisk are included on a special list of Magazines available to teachers in packets of ten for $1.00.)*

WIDE WORLD

BERGEN RAIN CLOUDS LIFT TO REVEAL THE NEAR-ISLAND CITY AS IT WAS BEFORE THE WAR

Spreading across a peninsula at the foot of its seven mountains, Bergen's waterfront scallops an anvil pattern in the waters of Byfjord. Many-windowed stone buildings (center) replaced wooden ones built when the city was young. The incurve of water at the right is the end of the main harbor where the fishing boats come in and the fishermen spread their catch on wharf stalls and turn salesmen.

Bulletin No. 3, May 3, 1948

Difficulties Await Explorers of Moon

"THE moon belongs to everyone" is the gist of what the Department of Interior has to say to enterprising individuals who bob up from time to time seeking title to acreage on the celestial body which the nursery-rhyme cow jumped over.

Sewickley, Pennsylvania, is the earthly residence of two of the latest applicants for official permission to stake out a land claim on the face of the man in the moon. The Interior Department gave them no encouragement.

But there will come a day, say the interplanetary-minded, when some earthly explorer will rocket outward and assert on-the-spot title to a choice moon manor. Thereupon, problems of moon ownership and sovereignty will become much more real.

Earth's Gravity Unconquered

How soon could this happen? Not very soon, on the basis of man's present knowledge and technical development.

The moon, traveling its elliptical orbit around the earth every four weeks (27.3 days), averages 238,900 miles distant—about 30 times the earth's diameter.

If such factors as the earth's gravitational pull and its course around the sun could be ignored, a super-spaceliner might set a straight-line course for where the moon rides tonight. Holding an average speed of 175 miles an hour, it would meet the moon eight weeks from now on the moon's second return to tonight's position.

But, as rocket experiments prove, gravity cannot be disregarded. So far, man has not succeeded in sending any sort of projectile out beyond the gravitational pull.

Jet planes are on the verge of speeds faster than sound—one-fifth of a mile per second. By contrast, a moonbound jet, to attain the momentum necessary to hurtle through space after shooting through the earth's atmosphere, would have to zoom forth at nearly seven miles a second—24,000 miles per hour. Even at this fantastic speed, it would take ten hours to reach the moon.

Problem of Landing on Moon

Approaching the satellite, new problems would arise. The most pressing would be how to brake forward speed, now abetted by the moon's gravitational pull, in order to make a gentle landing. Wings and parachutes would be useless as the moon has no atmosphere. Only counter-propulsion at the ship's nose would do the braking job.

A second problem of approach would be to pick a twilight landing area having a moderate temperature at the moment. In its four-week orbit, the moon presents the same face to the earth at all times. This is because it rotates on its own axis exactly once for each time it circles the earth. No earth-dweller has ever seen the other half of the moon.

Luna thus rotates but once in the four-week tour of its orbit, and has a four-week-long day. Any spot on its surface endures two weeks of

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Indian reservations and national monuments and parks, with their ancient cliff-dwellers' sites, all have stories to tell. The map is dotted with Indian- and Spanish-named settlements, and with such descriptive place names as Horsethief Trail, Wildhorse, and Sixshooter Peak.

NOTE: Areas in Colorado where uranium is being sought may be located on the Society's map of The Southwestern United States.

For additional information on the region, see "High Country of Colorado," in the *National Geographic Magazine* for July, 1946; and "Down the Rio Grande," October, 1939.

D. B. WALKER

WHERE "THE CLIFFS ARE SOLID SILVER, WITH WONDROUS WEALTH UNTOLD, AND THE BEDS OF THE RUNNING RIVERS ARE LINED WITH THE PUREST GOLD"

A pack train of 30 mules follows a switchback trail down Cornet Gulch from Liberty Bell Mine. This old picture shows how gold was brought out of the mountains in southwestern Colorado's mining heyday. Near by is Telluride, one of many mining camps which boomed into cities in the 1890's (see inside cover), then gradually dwindled as the minerals gave out. The long shed at the bottom protects an ore conveyor against snow. It resembles snow sheds which cover railroad tracks in high, open places.

Bulletin No. 4, May 3, 1948

Political Conventions Have 116-Year History

THE quadrennial crop of oratory, campaign buttons, and political fanfare is "bustin' out all over." The national conventions of the major political parties are just around the corner.

A unique and colorful feature of the American scene, these nominating conclaves have been magnets for the party faithful since 1832 when the first presidential candidate was designated by such methods.

This year all roads for the two major parties lead to Philadelphia (illustration, next page). There the Republicans foregather on June 21 to name their ticket. In the same Convention Hall the Democrats will get under way on July 12.

24th Contest between Major Parties

The ensuing campaign will be settled on the earliest date on which a national election can fall. November's first Tuesday after its first Monday falls on November 2 this year.

The contest will be the 24th between Democrats and Republicans since the present Republican Party took form in 1854. Fourteen winners have been Republicans, nine have been Democrats.

Only three times before has one city played host to both major-party conventions. The years were 1884, 1932, and 1944. In each year, the city was Chicago, and the successful candidate was the Democrat.

Chicago, hub of transportation lines from all parts of the country, has hosted more conventions than the next four cities combined. Seven of 12 Chicago-nominated Republicans have been elected, starting with Lincoln in 1860. Five of seven Chicago-nominated Democrats won elections, Grover Cleveland being the first and second, Franklin D. Roosevelt the third, fourth, and fifth.

Andrew Jackson Was the First Convention-nominated Candidate

By holding both 1948 conventions, Philadelphia takes clear title to second convention city from St. Louis. Three presidents have been named at five past Philadelphia conventions. St. Louis' score is two winners in five tries. Conventions have been held west to San Francisco, south to Houston, north to Minneapolis, east to New York City.

Early aspirants for offices announced their own candidacies or were named by groups of citizens. From such nominating caucuses, the national conventions developed. The first to do any nominating was held in May, 1832, when a Democratic national convention picked Andrew Jackson.

A simple majority of delegates nominates in each party. Prior to 1936, however, the Democrats required a two-thirds vote to nominate. In addition, the party's rules call for nearly 150 more delegates than the Republicans use. Consequently, longer sessions and more ballots have been the rule at Democratic conventions.

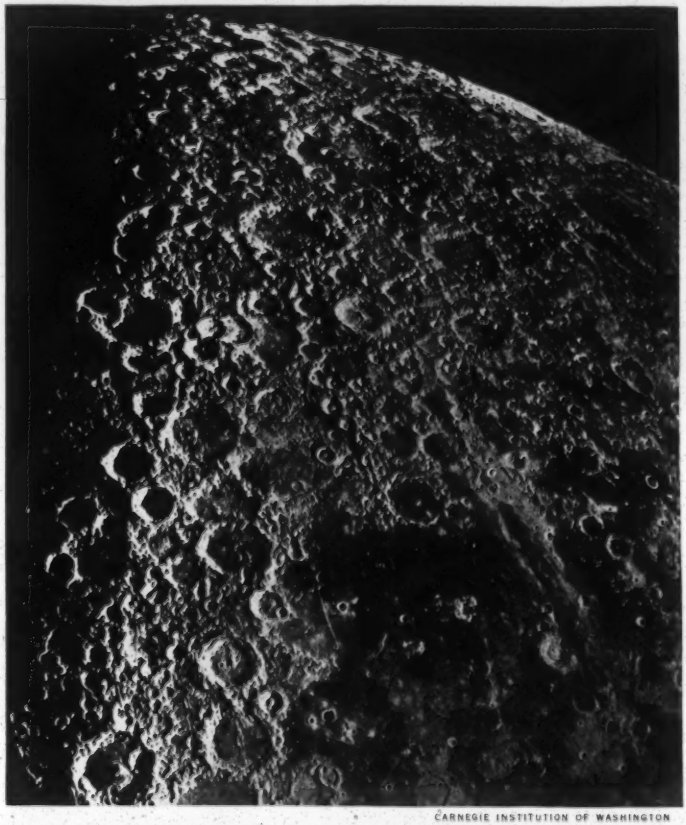
In 1924, John W. Davis was nominated on the 103rd ballot to end a nine-day deadlock between McAdoo and Al Smith. In 1920, James M. Cox

scorching sun devoid of cloud protection, followed by two weeks of blackest night. Daytime heat would easily boil water. Midnight cold is twice as frigid as nature's coldest ever recorded on earth. Moon explorers would have to land where these extremes merge.

The moon's diameter, 2,160 miles, is two-sevenths that of the earth. Gravitation at its surface is one-sixth that on earth—too little to retain an atmosphere. A man's step would be springy on the moon. He could jump six times his earthly limit.

Man's largest telescopes, such as the 200-inch reflector on Palomar Mountain, California, can magnify heavenly bodies as much as 10,000 times. They can bring the moon to a position equivalent to only 24 miles away (illustration, below). And television has already brought moon surfaces thus magnified into thousands of American homes.

NOTE: See also, "Eclipse Hunting in Brazil's Ranchland," in the *National Geographic Magazine* for September, 1947; and "News of the Universe," July, 1931.



CARNEGIE INSTITUTION OF WASHINGTON

WHAT THE MOON WOULD LOOK LIKE FROM AN APPROACHING "SPACE SHIP"

This telescope view of the moon in its last quarter brings it close enough to reveal its weird deadness. No plant, no animal, no insect can live on this surface. Craters, possibly caused by volcanic eruption or by meteorites falling uncushioned by air, range up to 140 miles across. Smooth plains were mistaken by early observers for seas. Mountains compare with earth's peaks in height.

Bulletin No. 5, May 3, 1948

British Guiana Has Its Own "India Problem"

BRITISH GUIANA, mentioned at Bogotá's Inter-American Conference as one of the Western Hemisphere's "colonial issues," has domestic difficulties of its own. With one of the empire's most confused racial situations, this South American dependency has wrestled for a century with a home-grown "India problem."

Of its 373,000 inhabitants, 164,000 are East Indians. Negroes almost equal the Asians in number. The rest of the population is made up of European-descended groups, native Indians, Chinese, and mixtures. The Europeans make up only three per cent of the total, and three-fourths of them are Portuguese.

More Self-rule

Immigration from East India began in 1838. It reached a peak in the last decade of the nineteenth century, when nearly 41,000 East Indians arrived in British Guiana to work on the sugar plantations. These newcomers formed a colony within a colony. Most of them still do not speak English nor share citizenship.

In recent years the colony has achieved greater self-rule by the establishment of a legislative council representing all groups and interests. Universal male suffrage has been considered. Voting is now based on income, and few of the non-European residents qualify.

British Guiana's main export crop is sugar cane. Nearly all of it grows in two dozen plantations along a narrow coastal strip between Georgetown, the capital, and New Amsterdam, the second-largest town. Long walls hold back the sea and rivers. Water gates allow the necessary flooding from the rivers. Rice occupies almost as much acreage as sugar cane, but it is a subsistence crop. Coconuts, Mauritia palm nuts (illustration, next page), and cacao are also grown for local consumption.

Bauxite (aluminum ore) is taken in great quantity from the interior. The deposits are worked by United States companies, and the entire output comes to North America. The United States gets 93 per cent of its bauxite from British Guiana and Surinam (Dutch Guiana). Mineral riches of the colony include gold and diamonds.

Waterfalls in Interior

Eighty per cent of British Guiana lies under tropical rain forest, three-fourths of it unexploited, and much of it unexplored. Cabinet woods and balata are the money yields.

The biggest features of the interior are waterfalls. Kaieteur Falls is the most famous, but its 741-foot drop is surpassed by at least two falls of about 2,000 feet. Kaieteur is four and a half times as high as Niagara, however, and averages 305 feet in width. Newly discovered Angel Falls, across the border in Venezuela, drops about a mile, the greatest drop in the world.

British Guiana was settled first by the Dutch, and Surinam was originally an English colony. The former changed hands several times

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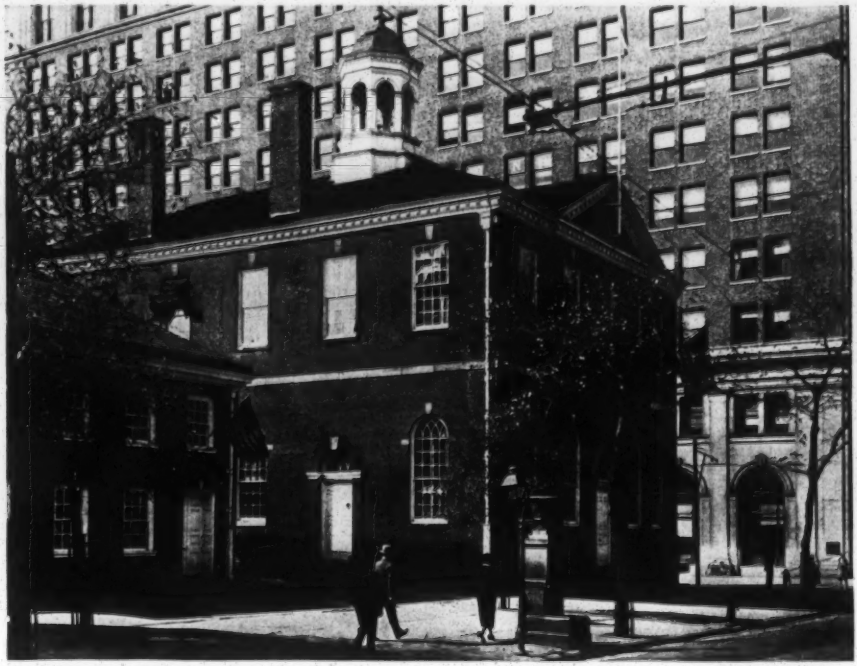
scored on the 44th ballot; in 1912, it was Woodrow Wilson on the 46th. In 1868, Horatio Seymour, unmentioned for 21 ballots, won on the 22nd. In 1860, Stephen Douglas was named only when the convention adjourned to Baltimore after a 57-ballot deadlock in Charleston, South Carolina.

For the Republicans, Harding was compromise victor on the 10th ballot in 1920 in Chicago, where Illinois Governor Lowden and General Leonard Wood had been the standoffs. Only once has the G.O.P. required more than ten ballots. In 1880, a third-term push for General Grant was opposed by advocates of James G. Blaine and John Sherman. James A. Garfield polled one vote on the 33rd ballot, won on the 36th.

NOTE: Cities where political conventions have been held may be located on the Society's map of The United States of America.



EDWIN L. WISHERD

BEFORE THE DAYS OF POLITICAL CONVENTIONS, PHILADELPHIA PLAYED HOST TO CONGRESS ITSELF

Congress Hall, in Independence Square, reserved the upstairs for the Senate and the first floor for the House of Representatives—before the capital of the United States was moved from Philadelphia to Washington, D. C. George Washington, who took the oath of office in this modest building for his second term as president, also delivered his Farewell Address here.

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before becoming permanently British in 1815. Surinam was given to the Dutch after the English took the island of Manhattan. British Guiana is nearly as large as New York State and Pennsylvania combined, but its population is comparable to that of Vermont.

Actually, there are five Guianas—British, Dutch, French, Brazilian, and Venezuelan—though only the first three usually figure on maps. The Guiana group, a large egg-shaped chunk of north-central South America, is completely surrounded by water—the Atlantic Ocean on the northeast, and, reading counterclockwise, the rivers Orinoco, Casiquiare, Negro, and Amazon. The Casiquiare connects with both the Orinoco and Amazon systems, making an island of the Guianas.

The three foreign-owned Guianas constitute the only nonindependent soil in continental South America. Of these, the British territory is the largest, but it is smaller than either Brazilian or Venezuelan Guiana.

NOTE: The Guianas may be located on the Society's map of South America.

For additional information on the Guianas, see "Color Glows in the Guianas—French and Dutch," in the *National Geographic Magazine* for April, 1943; and "New Worlds to Explore," November, 1932.

P. H. DORSETT

HARVESTING THE FRUIT OF THE MAURITIA PALM TAKES THE TALENTS OF AN ACROBAT

The likeness of this palm leaf to a witch's broomstick goes beyond mere appearance; it supports the aerial chores of this Guiana native as he hacks down an enormous cluster of fruit. The hundreds of small wine-colored globes, much used as food, add up to at least 100 pounds. The leaf-ladder can later be converted into an actual broom.